**3GPP TSG-SA WG4 Meeting #127S4-240206r1**

**Sophia-Antipolis, France, 29 January - 2 February 2024**

**Source: Samsung Electronics Co., Ltd.**

**Title: [FS\_AVATAR] pCR on Mapping avatar functions to IMS**

**Spec: 3GPP TR 26.813 v0.2.1**

**Agenda item: 9.10**

**Document for: Agreement**

**1. Introduction**

Of the use cases specified in TR 26.813 v0.2.1, UC1 to UC4 mention communication/sharing/gaming with multiple users, with UC1 specifically mentioning the use of IMS. Without any mention of specific solutions at this stage, IMS support for avatar may be a possible direction to realise such use cases.

SA2 is also working on avatar related aspects for IMS in the FS\_NG\_RTC\_Ph2 study (TS 23.700-77), specifically Key Issue #8: Support of IMS Avatar Communication. Within the description is a note related to SA4, stating that transition, transcoding, rendering and service/capability negotiation aspects require coordination with SA4.

This contribution introduces an initial mapping of the avatar functions (defined in our reference architecture for avatar) to existing IMS architectures, in particular the data channel (DC) architecture supporting the use of a service-based DC media function (DCMF) in TS 23.228.



Figure AC.2.1-1 of TS 23.228: Architecture option of IMS supporting DC usage with MF

Of the entities listed in the DC architecture, the key entities of relevance to SA4 for avatar include the:

* UE
* Media Function (MF)
* DC Application Server

The data channel media function may facilitate in the processing of avatar media, depending on the negotiations for network processing between the UE, network, and remote UE.

**2. Reason for Change**

Filling in empty section mapping avatar functions to current IMS DC architecture.

**3. Proposal**

It is proposed to agree the following changes to 3GPP TR 26.813.

\* \* \* First Change \* \* \* \*

8.6 Mapping to IMS-based Services



Figure 12. Mapping Avatar Functions to IMS DC Architecture

Figure 12 shows a mapping of avatar functions to the IMS DC architecture, specifically the possible avatar functions which may be supported by the MF. Through such functions, the network may assist the UE with media processing related to the creation of avatar and animation data, as well the consumption of avatar data, in particular scene management/composition, and rendering.

Avatar storage functions storing base avatars may exist at the UE, DCAS, or the remote UE (subject to security constraints). Temporary (cache) storage of base avatars in MF for an avatar service session may also be supported, enabling the congregation and distribution of base avatars to multiple UEs in the session without the need for repeated delivery by the base avatar source. Base avatars used in recent calls may be identified by the sending UE and subsequently delivered from the DCAS and remote UEs to the avatar storage function in the MF.

For the support of avatar services based on the IMS DC architecture, media negotiation between the UE and network should include aspects related to:

* UE capability
* Network capability

\* \* \* End of Changes \* \* \* \*